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| **Chemistry 11**  **Lab 4A**   * **Counting Atoms in a Chemical Reaction** | **Name: Date: Block:** |

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| **Pre-Lab** |

1. Write down the balanced equation for the reaction between zinc metal and hydrochloric acid.
2. What type of reaction is this? Choose from: synthesis, decomposition, single replacement, double replacement, neutralization, or combustion.
3. How will you know that the zinc metal is reacting with the hydrochloric acid?
4. What are the two objectives for this lab?
5. What equipment do you need to complete this lab?
6. In your own words, describe what you will do during this lab.
7. How will you dispose of your waste?

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| **Observations** |

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| Before the Reaction | |
| Mass of dry beaker |  |
| Mass of dry beaker + zinc |  |
| Mass of zinc |  |
| After the Reaction | |
| Mass of dry beaker + zinc |  |
| Mass of zinc |  |
| Qualitative Observations | |
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| **Analysis** |

1. What mass of zinc reacted?
2. How many moles of zinc reacted?
3. How many atoms of zinc reacted?

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| **Conclusion** |

1. Did you meet the objectives of this lab? Why or why not?
2. What is one possible source of error in this lab and how would it have impacted your results? You may not describe human error.

This lab report is due on: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_